

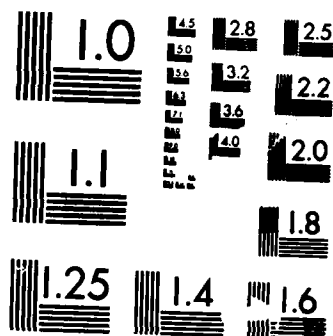
RELATIONSHIPS BETWEEN CATCHMENT AREA POPULATION AND
ANCILLARY SERVICE EXP. (U) ARMY HEALTH CARE STUDIES AND
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United States Army
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DEPARTMENT OF DEFENSE
TRI-SERVICE
PERFORMANCE MEASUREMENT WORKING GROUP

RELATIONSHIPS BETWEEN CATCHMENT AREA POPULATION
AND ANCILLARY SERVICE EXPENDITURES
IN NAVAL MEDICAL COMMAND FACILITIES

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SUMMARY

The National Defense Authorization Act for Fiscal Year 1987 (National Defense, 1986) directs the Secretary of Defense to establish by regulation the use of diagnosis related groups (DRGs) as the primary criteria for allocation of resources to Military Health Service System (MHSS) facilities. As one response to this legislation, the Assistant Secretary of Defense (Health Affairs) created the Tri-Service Financial Working Group (FWG) to assist in planning for the implementation of DRGs for resource allocation to MHSS facilities. One immediate concern of the FWG was the extent of direct patient care ancillary costs which have no workload credit. Of particular interest to the FWG were the amount and variation of ancillary costs contained in MEPRS subaccount work center FCC - Civilian Health and Medical Program for Uniformed Services (CHAMPUS) Beneficiary Support.

This study focused on medical treatment facilities of the Department of the Navy, Naval Medical Command. The analysis addressed three research questions:

- a. To what extent do catchment area population characteristics influence the consumption of ancillary services?
- b. What is the extent and variability of ancillary workload and costs within MEPRS functional category F - Special Programs, particularly subaccount work center FCC - CHAMPUS Beneficiary Support?

c. Is a population based model appropriate to predict the percent of ancillary workload accumulated in subaccount work center FCC - CHAMPUS Beneficiary Support?

Analysis demonstrated that as percent retired and average age of the catchment area population increased, pharmacy consumption transferred from inpatient and outpatient care to the special programs functional category. Data also suggested a similar transfer to dental care. These relationships were not demonstrated with laboratory and radiology. Analysis also demonstrated that there was substantial variation of workload and costs within MEPRS functional category F - Special Programs, particularly subaccount work center FCC - CHAMPUS Beneficiary Support. Some facilities accumulated extensive costs in this work center. Finally, it does appear that a population based model is appropriate to predict the percent of ancillary workload accumulated in subaccount work center FCC - CHAMPUS Beneficiary Support for pharmacy only.

RELATIONSHIPS BETWEEN CATCHMENT AREA POPULATION
AND ANCILLARY SERVICE EXPENDITURES
IN NAVAL MEDICAL COMMAND FACILITIES

INTRODUCTION

The National Defense Authorization Act for Fiscal Year 1987 (National Defense, 1986) directs the Secretary of Defense to establish by regulation the use of diagnosis related groups (DRGs) as the primary criteria for allocation of resources to Military Health Service System (MHSS) facilities. The Act further directs that the use of DRGs for budgetary purposes begin 1 October 1987 for inpatient services and 1 October 1988 for outpatient services (National Defense, 1986).

As one response to this legislation, the Assistant Secretary of Defense (Health Affairs) created the Tri-Service Financial Working Group (FWG) to assist in the provision and analysis of financial data, and assist in planning for the implementation of DRGs for resource allocation to MHSS facilities.

One immediate concern of the FWG was the extent of direct patient care ancillary costs that have been accumulated in Medical Expense and Performance Reporting System (MEPRS) final accounts which have no workload credit. If these costs were demonstrated to be substantial, then resources would have to be allocated on some basis other than Health Care Unit (HCU) or DRG based workload measures, such as a catchment area population based model. In

January 1987, the FWG requested that a study be conducted to determine the relationships between catchment area population and consumption of ancillary services in MHSS facilities. The FWG requested that pharmacy, laboratory, and radiology ancillary services be studied. Of particular interest to the FWG were the amount and variation of ancillary costs contained in MEPRS subaccount work center FCC - Civilian Health and Medical Program for Uniformed Services (CHAMPUS) Beneficiary Support.

This study focused on medical treatment facilities of the Department of the Navy, Naval Medical Command. The analysis addressed three research questions:

a. To what extent do catchment area population characteristics influence the consumption of ancillary services within Naval medical treatment facilities at the functional category level?

b. What is the extent and variability of ancillary workload and costs within MEPRS functional category F - Special Programs, particularly subaccount work center FCC - CHAMPUS Beneficiary Support?

c. Is a population based model appropriate to predict the percent of ancillary workload accumulated in subaccount work center FCC - CHAMPUS Beneficiary Support?

The two population characteristics used in this study were the percent of the catchment population who were retired and the average age of the catchment population. The functional categories studied

were inpatient care, outpatient care, dental care, and special programs.

MEPRS files containing the Expense Assignment Stepdown (EAS) data for intermediate operating accounts were used as the source for ancillary workload distribution and MEPRS PCOM files were used as the source for ancillary expenses. Data was supplied by Department of the Navy, Naval Medical Command, Washington, D.C. Actual statistical analysis was conducted using SAS, Version 5 System Software (SAS Institute, Inc., 1985a, 1985b).

METHODOLOGY

Prior to statistical analysis, MEPRS EAS files required substantial reformatting. The MEPRS EAS files contained header records identifying the ancillary service and a variable number of detail records associated with each header record. Each detail record represented a final operating account within the medical treatment facility which consumed some portion of that ancillary workload. The performance factor for pharmacy, laboratory, and radiology ancillary services was the weighted procedure and was contained on the detail record as net quarterly totals for each final operating account.

For each ancillary service studied the following procedure was followed for both Fiscal Year (FY) 1985 and FY 1986:

- a. Quarterly ancillary workload totals were added and yearly totals for each final operating account were determined. Yearly final operating account totals were determined at the functional

category (one digit), summary account (two digit) and within functional category F - Special Programs, at the subaccount work center level (three digit).

b. Facility ancillary workload grand totals were determined and each final operating account total was divided by the facility total to determine the proportion of total facility ancillary workload consumed by each final operating account.

c. Facility total ancillary costs were extracted from MEPRS PCOM files and merged with the data base discussed above. Facility total ancillary costs were multiplied by each final operating account ancillary workload proportion to determine each final operating account consumption of ancillary costs.

d. The two population parameters: the percentage of retired in the population and the average age of the population, were extracted from the Resource Analysis and Planning System (RAPS) module of the Defense Management Information System (DMIS) and merged with the data base. The data extracted from RAPS was FY 1985 catchment area population data and available for hospitals only.

RESULTS

Initially, the distribution of ancillary costs across functional categories at the Naval Medical Command level was determined and is depicted in Table 1. A substantial percentage of pharmacy, laboratory, and radiology costs were accumulated in

special programs in both FY 1985 and FY 1986. Percentages range from 12% to 22%.

Correlations between ancillary service percent consumption at the functional account level (inpatient, outpatient, dental, and special programs) and the catchment area population characteristics of percent retired and average age are depicted in Table 2. These relationships are presented for both FY 1985 and FY 1986. As this was an exploratory study, a .10 Type I error rate was used for correlation analysis. For pharmacy there was a moderately strong, statistically significant, positive correlation between percent special program functional category ancillary service consumption and both percent retired and average age in both FY 1985 and 1986. This relationship with the special program functional account was not demonstrated with laboratory and radiology ancillary services. Pharmacy also demonstrated less strong, statistically significant, negative correlations with outpatient care and dental care in FY 1986. During FY 1986, there was a moderately strong, statistically significant, positive correlation between laboratory consumption in dental functional category and both percent retired and average age. During FY 1985, a moderately strong, statistically significant, positive relationship was exhibited between radiology consumption in dental functional category and both percent retired and average age. Although the sign of the relationship is consistent in FY 1986, the relationship was not statistically significant.

Ancillary service consumption within the special program functional category was examined in detail. In Appendix A, Tables A-1 to A-6 present the distribution of ancillary costs across work centers within the special programs functional category for both FY 1985 and FY 1986. The subaccount FCC - CHAMPUS Beneficiary Support work center contained the large majority of pharmacy costs in the special program functional category for both FY 1985 and FY 1986. In contrast, the percentage of laboratory costs contained in subaccount work center FCC was very small with a majority of laboratory costs contained in subaccount FCD - Support to Other Military Agencies. Radiology costs exhibited a relationship similar to that of pharmacy with a majority of radiology costs accumulated in subaccount work center FCC, but the overall percentage again remained small.

Tables A-7 to A-12 present the percent of the ancillary budget contained in work center FCC - CHAMPUS beneficiary support by each medical treatment facility. The percentage of total facility pharmacy budget spent for CHAMPUS beneficiary support demonstrated wide variability among Naval medical facilities. In FY 1985 this percent ranged from a low of .05% at NH Roosevelt Roads to over 43% at NMC Port Hueneme. In FY 1986 a similar pattern of variation was demonstrated. With regard to laboratory and radiology, although variability was again high in both FY 1985 and 1986, the overall percentages were very low in comparison to pharmacy.

Regression analysis was conducted to determine the extent that the population characteristics of percent retired and average age could predict consumption of ancillary services by work center FCC in Naval hospitals. When preliminary regression analysis was conducted for pharmacy and residual plots examined, two hospitals were marked outliers; NH Camp Lejeune and NH Roosevelt Roads. Consequently, these two facilities were eliminated from the analysis. For consistency these two facilities were excluded from all regression analysis. Appendix B provides plots of percent of total facility ancillary budget for CHAMPUS beneficiary support by both percent retired and average age of the catchment area population. Regression lines have been included on those plots which resulted in statistically significant regression equations. Appendix C provides the analysis of variance tables for the regression analysis performed.

Table 3 provides a summary of regression results. Regression equations were not statistically significant with the exception of pharmacy, where both percent retired and average age of the beneficiary population were statistically significant in predicting the percentage of the facility's pharmacy budget consumed by subaccount work center FCC - CHAMPUS Beneficiary Support. The variance explained by percent retired and average age was high in view of the relatively small sample sizes. In FY 1986, examination of pharmacy by average age plots suggested that a curvilinear relationship might be present. To test this relationship age

squared was included in the model. Although there was a slight improvement in explained variance the coefficients were not statistically significant and the higher order model was rejected.

Although the preceding results were statistically significant, and appeared relatively consistent from FY 1985 to FY 1986, caution must be used when using MEPRS data for policy decisions. Individual hospital MEPRS data often revealed inconsistencies over time and differences among similar facilities which were difficult to explain. A thorough analysis of trends and patterns in the ancillary service distributions was not performed, but a few examples of apparent inconsistencies in the data are given below.

At the Naval Medical Command level, pharmacy costs allocated to the special program subaccounts dropped from 22% of all pharmacy costs in FY 1985 to 16% in FY 1986. While many of the Navy facilities exhibited consistency over the two years, there were several significant changes which should be investigated. At NH Portsmouth, pharmacy costs going to the special program subaccounts dropped from \$2.6 million to just over \$640,000, or from 30% of all pharmacy costs to only 8%. Similar changes were observed in other facilities (NH San Diego - 20% in FY 1985, 11% in FY 1986; NH Oak Harbor - 18% in FY 1985, 11% in FY 1986). At NH Oakland, pharmacy procedures allocated to F accounts dropped from about 18% in FY 85 to 11% in FY 1986; additionally, pharmacy cost data was missing for FY 1980. NH Charleston had both workload and cost data missing for

FY 1986 although F accounts accounted for more than 22% of their total pharmacy costs of \$4.3 million in FY 1985.

Most Navy facilities also exhibited consistency over the two fiscal years in radiology costs and workload. However, several exceptions were noted. While about 15% of radiology costs at the Naval Medical Command level were assigned to Emergency Clinics (BI) in each of the two years, NH Great Lakes dropped from 15% in FY 1985 to none in FY 1986. In FY 1985, NH Great Lakes reported radiology costs going to 21 different two-digit MEPRS accounts, including 47% to Primary Care Clinics (BH), but in FY 1986 they showed radiology costs assigned to only 14 accounts with 92% in Primary Care. NH San Diego reported no radiology costs assigned to Emergency Clinics in FY 1985 (44% assigned to Surgery Clinics), but 13% in Emergency Clinics in FY 1986 (only 12% to Surgery Clinics). NH Oakland reported no radiology costs going to any inpatient services in FY 1985 and FY 1986. Finally, NH Orlando reported radiology cost data in 17 two-digit accounts in FY 1985 (6% to inpatient accounts, 30% to Primary Care), but only 7 two-digit accounts in FY 1986 (none to inpatient areas and 78% to Primary Care).

CONCLUSIONS

Analysis demonstrated that catchment area population characteristics exerted a strong influence on the consumption of pharmacy services within Naval medical treatment facilities at the functional category level. As the percent retired and average age of a Naval Medical Command hospital's catchment area population

increased, pharmacy service consumption shifted from inpatient care and outpatient care to special programs. These relationships were not demonstrated with laboratory and radiology ancillary services. The data also indicated there was a similar laboratory (FY 1986) and radiology (FY 1985) workload shift to dental care when percent retired or average age increased.

Analysis also demonstrated that there was substantial variation of ancillary workload and costs within MEPRS functional category F - Special Programs, particularly subaccount work center FCC - CHAMPUS Beneficiary Support. Some facilities accumulated extensive costs in this work center.

It does appear that a population based model would be appropriate to predict the percent of ancillary workload accumulated in subaccount work center FCC - CHAMPUS Beneficiary Support, but for pharmacy service only.

Finally, there may be logical explanations for many of the apparent inconsistencies noted in this report, but such wide fluctuations in cost and workload data need to be studied further. It appears that insufficient edit checks for reasonableness of MEPRS data are built into the system. Unless a thorough analysis of data and reporting problems is conducted with feedback and training provided to individual hospitals, the data will never improve and decisions made on the basis of MEPRS data will continue to be suspect.

TABLE 1

NAVAL MEDICAL COMMAND
 ANCILLARY COST DISTRIBUTION
 MEPRS FUNCTIONAL CATEGORIES

MEPRS FUNCTIONAL CATEGORY	PHARMACY PERCENT FY 1985	PHARMACY PERCENT FY 1986	LABORATORY PERCENT FY 1985	LABORATORY PERCENT FY 1986	RADIOLOGY PERCENT FY 1985	RADIOLOGY PERCENT FY 1986
INPATIENT	19.41	18.59	24.49	23.39	7.12	12.57
OUTPATIENT	58.43	64.81	63.11	61.97	80.35	75.04
DENTAL	.40	.76	.12	.14	.12	.04
SPECIAL PROGRAMS	21.77	15.84	12.28	14.50	12.40	12.34

TABLE 2

NAVAL MEDICAL COMMAND

CORRELATION COEFFICIENTS

BETWEEN ANCILLARY SERVICES AND

PERCENT RETIRED, AVERAGE AGE OF BENEFICIARY POPULATION

FISCAL YEAR 1985

	PHARMACY			LABORATORY			RADIOLOGY					
	I.P. ¹	O.P.	DEN.	S.P.	I.P.	O.P.	DEN.	S.P.	I.P.	O.P.	DEN.	S.P.
% RETIRED	-.223	-.222	-.369	.684**	-.050	-.033	.048	-.045	.019	.018	.540*	-.126
AVERAGE AGE	-.209	-.241	-.380	.670**	-.010	-.012	.049	-.049	.016	.015	.486*	-.138

FISCAL YEAR 1986

	PHARMACY				LABORATORY				RADIOLOGY			
	I.P.	O.P.	DEN.	S.P.	I.P.	O.P.	DEN.	S.P.	I.P.	O.P.	DEN.	S.P.
% RETIRED	-.056	-.349*	-.432*	.666**	.071	-.061	.496*	-.168	.081	-.223	.337	.258
AVERAGE AGE	-.046	-.356*	-.464*	.686**	.119	-.123	.528*	.149	.141	-.223	.333	.245

¹MEPRS Functional Categories - I.P. = A - Inpatient Care, O.P. = B - Outpatient Care,
DEN. = C - Dental Care, S.P. = F - Special Programs.

*Prob. < .10

**Prob. < .05

TABLE 3

NAVAL MEDICAL COMMAND

REGRESSION ANALYSIS

PREDICTION OF SPECIAL PROGRAMS - FCC ANCILLARY SERVICE COSTS

BY PERCENT RETIRED, AVERAGE AGE OF BENEFICIARY POPULATION

	N	INTERCEPT	SLOPE	ADJ. R ²	F-TEST	SIG.
PHARMACY - FY 85						
% RETIRED	20	-6.651	.954	53.5%	22.841	< .001
AVERAGE AGE	20	-37.545	1.483	60.8%	30.403	< .001
PHARMACY - FY 86						
% RETIRED	20	-3.338	.628	52.9%	22.308	< .001
AVERAGE AGE	20	-23.585	.972	55.9%	25.157	< .001
AGE + AGE ²	20	-32.332	-2.609 + .056	61.5%	16.145	< .001
LABORATORY - FY 85						
% RETIRED	16	.489	.012	-5.9%	.164	N.S.
AVERAGE AGE	16	.313	.012	-6.7%	.065	N.S.
LABORATORY - FY 86						
% RETIRED	11	.074	.030	-4.8%	.540	N.S.
AVERAGE AGE	11	-.943	.048	-4.2%	.598	N.S.
RADIOLOGY - FY 85						
% RETIRED	12	-.735	.095	13.0%	2.644	N.S.
AVERAGE AGE	12	-3.781	.148	15.2%	2.964	N.S.
RADIOLOGY - FY 86						
% RETIRED	12	.143	.019	2.7%	1.307	N.S.
AVERAGE AGE	12	-.363	.026	.2%	.983	N.S.

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SAS Institute, Inc., SAS Users Guide: Statistics, Version 5 Edition, Cary, NC: SAS Institute, Inc., 1985.

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78234-6200 (1)
Naval Medical Command (MEDCOM-13), Wash., D.C. 20372-5120 (5)
Stimson Library, AHS, Bldg. 2840, Ft. Sam Houston, TX
78234-6100 (1)

APPENDIX A

NAVAL MEDICAL COMMAND
ANCILLARY COST DISTRIBUTION
SPECIAL PROGRAM WORK CENTERS
FISCAL YEARS 1985 AND 1986

TABLE A-1

NAVAL MEDICAL COMMAND

DISTRIBUTION OF PHARMACY COSTS

SPECIAL PROGRAM WORK CENTERS - FISCAL YEAR 1985

MEPRS SPECIAL PROGRAM WORK CENTER	MEPRS SPECIAL PROGRAM NAME	PHARMACY COST	PERCENT
FAE	ALCOHOL AND DRUG ABUSE	\$233,282	.96
FAF	DRUG SCREENING AND TESTING	\$55	.00
FAH	CLINICAL INVESTIGATION PROGRAM	\$40	.00
FAK	STUDENT EXPENSES	\$127	.00
FAZ	HEALTH RELATED PROGRAMS-NEC	\$375	.00
FBA	COMMUNITY HEALTH SERVICES	\$48,112	.17
FBB	PREVENTIVE MEDICINE	\$22,278	.10
FBC	INDUSTRIAL HYGIENE PROGRAM	\$15,746	.09
FBD	RADIATION HEALTH PROGRAM	\$70	.00
FBE	ENVIRONMENTAL HEALTH PROGRAM	\$1,346	.01
FBF	EPIDEMIOLOGY HEALTH PROGRAM	\$6,978	.03
FBG	OCCUPATIONAL HEALTH PROGRAM	\$783,870	3.28
FBH	VETERINARY SERVICES	\$41	.00
FBI	IMMUNIZATIONS	\$75,736	.35
FBX	FBX (COST POOL)	\$1,302	.01
FCA	SUPPLEMENTAL CARE	\$781,520	3.16
FCB	GUEST LECTURER PROGRAM	\$43,791	.12
FCC	CHAMPUS BENEFICIARY SUPPORT	\$14,109,996	61.77
FCD	SUPPORT TO OTHER MILITARY ACTIVITIES	\$7,355,121	29.07
FCE	SUPPORT TO OTHER FEDERAL AGENCIES	\$46,421	.18
FDA	CONTINGENCY AND EMERGENCY OPERATIONS	\$15,434	.08
FDC	NONPATIENT FOOD OPERATIONS	\$1,336	.01
FDZ	MILITARY UNIQUE ACTIVITY-NEC	\$90,005	.62
FEA	PATIENT TRANSPORTATION	\$22	.00
FEB	PATIENT MOVEMENT	\$290	.00
	=====		=====
		\$23,633,294	100.00

TABLE A-2

NAVAL MEDICAL COMMAND

DISTRIBUTION OF LABORATORY COSTS

SPECIAL PROGRAM WORK CENTERS - FISCAL YEAR 1985

MEPRS SPECIAL PROGRAM WORK CENTER	MEPRS SPECIAL PROGRAM NAME	LABORATORY COST	PERCENT
FAD	DOD MILITARY BLOOD PROGRAM	\$1,542,621	10.07
FAE	ALCOHOL AND DRUG ABUSE	\$151,539	1.61
FAF	DRUG SCREENING AND TESTING	\$59,827	.51
FAH	CLINICAL INVESTIGATION PROGRAM	\$2,074	.03
FAI	PHYSICAL TRAINING/SUPPORT PROGRAM	\$5,819	.05
FAJ	TRAINING AND EDUCATION PROGRAMS	\$21	.00
FBA	COMMUNITY HEALTH SERVICES	\$178,269	1.92
FBB	PREVENTIVE MEDICINE	\$117,779	1.25
FBC	INDUSTRIAL HYGIENE PROGRAM	\$3,806	.04
FBD	RADIATION HEALTH PROGRAM	\$1,278	.02
FBE	ENVIRONMENTAL HEALTH PROGRAM	\$17,037	.21
FBF	EPIDEMIOLOGY HEALTH PROGRAM	\$35,348	.71
FBG	OCCUPATIONAL HEALTH PROGRAM	\$2,832,226	31.39
FBH	VETERINARY SERVICES	\$6,635	.08
FBI	IMMUNIZATIONS	\$14,345	.22
FBX	FBX (COST POOL)	\$15,094	.24
FCA	SUPPLEMENTAL CARE	\$25,240	.29
FCC	CHAMPUS BENEFICIARY SUPPORT	\$271,390	3.92
FCD	SUPPORT TO OTHER MILITARY ACTIVITIES	\$4,777,821	45.99
FCE	SUPPORT TO OTHER FEDERAL AGENCIES	\$369,883	1.34
FDA	CONTINGENCY AND EMERGENCY OPERATIONS	\$4,140	.06
FDB	BASE OPERATIONS - MEDICAL INSTALLATIONS	\$2	.00
FDC	NONPATIENT FOOD OPERATIONS	\$2,793	.04
FEA	PATIENT TRANSPORTATION	\$103	.00
FED	MILITARY PERSONNEL ADMINISTRATION	\$6	.00
	=====	=====	=====
		\$10,435,096	100.00

TABLE A-3

NAVAL MEDICAL COMMAND

DISTRIBUTION OF RADIOLOGY COSTS

SPECIAL PROGRAM WORK CENTERS - FISCAL YEAR 1985

MEPRS SPECIAL PROGRAM WORK CENTER	MEPRS SPECIAL PROGRAM NAME	RADIOLOGY COST	PERCENT
FAE	ALCOHOL AND DRUG ABUSE	\$30,336	.72
FBA	COMMUNITY HEALTH SERVICES	\$254,126	2.27
FBB	PREVENTIVE MEDICINE	\$50,804	1.27
FBC	INDUSTRIAL HYGIENE PROGRAM	\$11,310	.32
FBD	RADIATION HEALTH PROGRAM	\$33	.00
FBE	ENVIRONMENTAL HEALTH PROGRAM	\$8,951	.23
FBF	EPIDEMIOLOGY HEALTH PROGRAM	\$1,263	.04
FBG	OCCUPATIONAL HEALTH PROGRAM	\$2,008,183	45.80
FBH	VETERINARY SERVICES	\$19	.00
FBI	IMMUNIZATIONS	\$8,113	.20
FCA	SUPPLEMENTAL CARE	\$3,417	.06
FCB	GUEST LECTURER PROGRAM	\$30	.00
FCC	CHAMPUS BENEFICIARY SUPPORT	\$270,549	6.20
FCD	SUPPORT TO OTHER MILITARY ACTIVITIES	\$1,775,733	39.28
FCE	SUPPORT TO OTHER FEDERAL AGENCIES	\$113,768	3.28
FDA	CONTINGENCY AND EMERGENCY OPERATIONS	\$244	.01
FDB	BASE OPERATIONS - MEDICAL INSTALLATIONS	\$263	.00
FDC	NONPATIENT FOOD OPERATIONS	\$17,788	.31
FDG	TDY/TAD ENROUTE TO PCS	\$29	.00
		=====	=====
		\$4,554,959	100.00

TABLE A-4

NAVAL MEDICAL COMMAND

DISTRIBUTION OF PHARMACY COSTS

SPECIAL PROGRAM WORK CENTERS - FISCAL YEAR 1986

MEPRS SPECIAL PROGRAM WORK CENTER	MEPRS SPECIAL PROGRAM NAME	PHARMACY COST	PERCENT
FAE	ALCOHOL AND DRUG ABUSE	\$402,128	2.46
FAF	DRUG SCREENING AND TESTING	*	.00
FAH	CLINICAL INVESTIGATION PROGRAM	\$1,586	.01
FAJ	TRAINING AND EDUCATION PROGRAMS	\$30	.00
FAK	STUDENT EXPENSES	\$6	.00
FAZ	HEALTH RELATED PROGRAMS-NEC	\$1,612	.01
FBA	COMMUNITY HEALTH SERVICES	\$1,018,282	5.90
FBB	PREVENTIVE MEDICINE	\$97,635	.53
FBD	RADIATION HEALTH PROGRAM	\$134	.00
FCA	SUPPLEMENTAL CARE	\$393,640	2.10
FCB	GUEST LECTURER PROGRAM	\$1,382	.01
FCC	CHAMPUS BENEFICIARY SUPPORT	\$10,878,302	62.68
FCD	SUPPORT TO OTHER MILITARY ACTIVITIES	\$3,538,300	25.42
FCE	SUPPORT TO OTHER FEDERAL AGENCIES	\$52,914	.71
FDA	CONTINGENCY AND EMERGENCY OPERATIONS	\$740	.00
FDB	BASE OPERATIONS - MEDICAL INSTALLATIONS	\$432	.00
FDC	NONPATIENT FOOD OPERATIONS	\$26,102	.16
FDZ	MILITARY UNIQUE ACTIVITIES-NEC	\$62	.00
FEA	PATIENT TRANSPORTATION	\$262	.00
		=====	=====
		\$16,413,549	100.00

*Cost data missing when MEPRS PCOM files submitted for analysis.

TABLE A-5

NAVAL MEDICAL COMMAND

DISTRIBUTION OF LABORATORY COSTS

SPECIAL PROGRAM WORK CENTERS - FISCAL YEAR 1986

MEPRS SPECIAL PROGRAM WORK CENTER	MEPRS SPECIAL PROGRAM NAME	LABORATORY COST	PERCENT
FAC	OPHTHALMIC FABRICATION AND REPAIR	\$5	.00
FAD	DOD MILITARY BLOOD PROGRAM	\$2,536,917	10.42
FAE	ALCOHOL AND DRUG ABUSE	\$213,802	2.29
FAH	CLINICAL INVESTIGATION PROGRAM	\$714	.01
FAI	PHYSICAL TRAINING/SUPPORT PROGRAM	\$19	.00
FBA	COMMUNITY HEALTH SERVICES	\$2,435,524	19.50
FBB	PREVENTIVE MEDICINE	\$6,689	.14
FBD	RADIATION HEALTH PROGRAM	\$6,432	.03
FCA	SUPPLEMENTAL CARE	\$13,349	.13
FCB	GUEST LECTURER PROGRAM	\$2,609	.02
FCC	CHAMPUS BENEFICIARY SUPPORT	\$229,556	3.77
FCD	SUPPORT TO OTHER MILITARY ACTIVITIES	\$3,014,782	42.75
FCE	SUPPORT TO OTHER FEDERAL AGENCIES	\$20,714	.85
FDA	CONTINGENCY AND EMERGENCY OPERATIONS	\$5,863	.05
FDB	BASE OPERATIONS - MEDICAL INSTALLATIONS	\$13	.00
FDC	NONPATIENT FOOD OPERATIONS	\$70	.00
FDD	DECEDENT AFFAIRS	\$4,008	.01
FED	MILITARY PERSONNEL ADMINISTRATION	\$2,910	.03
	=====		
		\$8,493,976	100.00

TABLE A-6

NAVAL MEDICAL COMMAND

DISTRIBUTION OF RADIOLOGY COSTS

SPECIAL PROGRAM WORK CENTERS - FISCAL YEAR 1986

MEPRS SPECIAL PROGRAM WORK CENTER	MEPRS SPECIAL PROGRAM NAME	RADIOLOGY COST	PERCENT
FAC	OPHTHALMIC FABRICATION AND REPAIR	\$102	.00
FAE	ALCOHOL AND DRUG ABUSE	\$50,177	.70
FAH	CLINICAL INVESTIGATION PROGRAM	\$13,054	.13
FAI	PHYSICAL TRAINING/SUPPORT PROGRAM	\$57,650	.59
FBA	COMMUNITY HEALTH SERVICES	\$3,148,126	57.05
FBB	PREVENTIVE MEDICINE	\$6,020	.06
FBD	RADIATION HEALTH PROGRAM	\$68	.00
FCA	SUPPLEMENTAL CARE	\$4,992	.08
FCB	GUEST LECTURER PROGRAM	\$61	.00
FCC	CHAMPUS BENEFICIARY SUPPORT	\$158,354	1.97
FCD	SUPPORT TO OTHER MILITARY ACTIVITIES	\$1,736,875	38.67
FCE	SUPPORT TO OTHER FEDERAL AGENCIES	\$38,370	.71
FDB	BASE OPERATIONS - MEDICAL INSTALLATIONS	\$181	.00
FDC	NONPATIENT FOOD OPERATIONS	\$1,468	.01
FDD	DECEDENT AFFAIRS	\$299	.00
FEA	PATIENT TRANSPORTATION	\$19	.00
FED	MILITARY PERSONNEL ADMINISTRATION	\$182	.00
		=====	
		\$5,215,998	100.00

TABLE A-7

NAVAL MEDICAL COMMAND

DISTRIBUTION OF PHARMACY COSTS

CHAMPUS BENEFICIARY SUPPORT SUBACCOUNT WORK CENTER (FCC)

FISCAL YEAR 1985

FACILITY NAME	PHARMACY COST	PERCENT OF TOTAL BUDGET
NMC PORTSMOUTH NH	\$113,707	16.03
NMC ANNAPOLIS	\$174,965	18.20
NH PORTSMOUTH	\$327,068	3.72
NH PENSACOLA	\$752,211	15.56
NH GREAT LAKES	\$1,134	.04
NH JACKSONVILLE	\$1,065,327	16.87
NH SAN DIEGO	\$2,008,706	17.09
NMC KEY WEST	\$96,352	16.53
NH CORPUS CHRISTI	\$267,134	12.96
NH OAKLAND	\$1,181,730	12.95
NMC WASHINGTON DC	\$9,845	2.05
NMC SAN DIEGO	\$280,212	18.91
NH MILLINGTON	\$255,265	11.71
NH BEAUFORT	\$58,719	3.93
NH GROTON	\$2,696	.14
NH ROOSEVELT ROADS	\$399	.05
NH ORLANDO	\$1,026,754	28.77
NH CHERRY POINT	\$8,951	.85
NH OAK HARBOR	\$164,639	15.54
NH PATUXENT RIVER	\$13,695	1.77
NMC PORT HUENEME	\$478,010	43.26
NMC NEW ORLEANS	\$123,579	20.13
NH CHARLESTON	\$812,590	18.51
NH NEWPORT	\$423,907	20.39
NH LONG BEACH	\$1,109,409	22.28
NH CAMP LEJEUNE	\$664,356	18.23
NH CAMP PENDLETON	\$379,578	8.44
NH BREMERTON	\$141,072	6.73
NMC PEARL HARBOR	\$114,286	9.66
NH PHILADELPHIA	\$664,404	19.71
NMC NORFOLK	\$1,369,295	19.98
=====		
	\$14,109,995	

TABLE A-8
 NAVAL MEDICAL COMMAND
 DISTRIBUTION OF LABORATORY COSTS
 CHAMPUS BENEFICIARY SUPPORT SUBACCOUNT WORK CENTER (FCC)
 FISCAL YEAR 1985

FACILITY NAME	LABORATORY COST	PERCENT OF TOTAL BUDGET
NMC ANNAPOLIS	\$785	.29
NH PORTSMOUTH	\$7,196	.08
NH PENSACOLA	\$21,085	.97
NH GREAT LAKES	\$5,267	.22
NH SAN DIEGO	\$1,315	.02
NH CORPUS CHRISTI	\$26,506	2.46
NH OAKLAND	\$635	.01
NMC SAN DIEGO	\$613	.15
NH MILLINGTON	\$27,275	1.91
NH BEAUFORT	\$6,980	.79
NH GROTON	\$16,406	1.17
NH ORLANDO	\$39,500	2.32
NH NAPLES	\$6	.00
NH OAK HARBOR	\$80	.02
NH NEWPORT	\$26,515	1.14
NH LONG BEACH	\$266	.01
NH CAMP LEJEUNE	\$55,252	2.26
NH BREMERTON	\$5,153	.30
NH PHILADELPHIA	\$2,782	.09
NMC NORFOLK	\$27,772	1.23
	=====	
	\$271,389	

TABLE A-9
 NAVAL MEDICAL COMMAND
 DISTRIBUTION OF RADIOLOGY COSTS
 CHAMPUS BENEFICIARY SUPPORT SUBACCOUNT WORK CENTER (FCC)
 FISCAL YEAR 1985

FACILITY NAME	RADIOLOGY COST	PERCENT OF TOTAL BUDGET
NMC ANNAPOLIS	\$7,506	2.02
NH PENSACOLA	\$1,025	.05
NH GREAT LAKES	\$2,312	.17
NH SAN DIEGO	\$1,325	.02
NMC KEY WEST	\$11,040	3.56
NH CORPUS CHRISTI	\$19,930	2.54
NH BEAUFORT	\$2,254	.37
NH GROTON	\$10,396	1.25
NH CHERRY POINT	\$278	.07
NH PATUXENT RIVER	\$280	.10
NH NEWPORT	\$24,673	2.92
NH LONG BEACH	\$92,730	4.90
NH CAMP LEJEUNE	\$58,052	3.48
NH BREMERTON	\$7,428	.83
NH PHILADELPHIA	\$115	.01
NMC NORFOLK	\$31,206	1.77
	=====	
	\$270,550	

TABLE A-10

NAVAL MEDICAL COMMAND

DISTRIBUTION OF PHARMACY COSTS

CHAMPUS BENEFICIARY SUPPORT SUBACCOUNT WORK CENTER (FCC)

FISCAL YEAR 1986

FACILITY NAME	PHARMACY COST	PERCENT OF TOTAL BUDGET
NMC ANNAPOLIS	\$116,571	16.12
NH PORTSMOUTH	\$218,707	2.71
NH PENSACOLA	\$589,064	9.08
NH GREAT LAKES	\$170,773	4.93
NH JACKSONVILLE	\$735,806	13.30
NH SAN DIEGO	\$1,372,936	9.59
NH CORPUS CHRISTI	\$193,635	9.76
NH OAKLAND	*	7.35
NMC SAN DIEGO	*	19.06
NH MILLINGTON	\$238,377	10.33
NH BEAUFORT	\$40,132	2.56
NH GROTON	\$74,819	3.55
AIR STA YUMA	*	22.68
NH ORLANDO	\$1,685,073	24.77
NMC SEATTLE	\$257,751	28.78
NH CHERRY POINT	\$70,133	5.65
NH OAK HARBOR	\$582	.06
NH PATUXENT RIVER	\$23,002	2.27
NMC PORT HUENEME	\$383,008	33.35
NH NEWPORT	\$553,052	13.59
NH LONG BEACH	\$1,194,537	21.36
NH CAMP LEJEUNE	\$320,698	8.10
NH CAMP PENDLETON	\$203,234	4.35
NH BREMERTON	\$151,316	6.03
NH GUAM	\$13,407	.49
NH PHILADELPHIA	\$556,806	14.07
NMC NORFOLK	\$1,714,884	20.61
	=====	
	\$10,878,303	

*Cost data missing when MEPRS PCOM files submitted for analysis.

TABLE A-11
 NAVAL MEDICAL COMMAND
 DISTRIBUTION OF LABORATORY COSTS
 CHAMPUS BENEFICIARY SUPPORT SUBACCOUNT WORK CENTER (FCC)
 FISCAL YEAR 1986

FACILITY NAME	LABORATORY COST	PERCENT OF TOTAL BUDGET
NMC ANNAPOLIS	\$7,801	2.46
NH PENSACOLA	\$47,909	1.77
NH SAN DIEGO	\$1,396	.02
NH CORPUS CHRISTI	\$10,084	.76
NH OAKLAND	*	.05
NMC WASHINGTON DC	\$74	.03
NH MILLINGTON	\$25,810	1.56
NH BEAUFORT	\$4,981	.48
NH GROTON	\$5,342	.35
AIR STA YUMA	*	.61
NH ORLANDO	\$53,034	2.57
NH NEWPORT	\$527	.02
NH CAMP LEJEUNE	\$209	.01
NH CAMP PENDLETON	\$12	.00
NH BREMERTON	\$1,093	.04
NH PHILADELPHIA	\$32,665	1.00
NMC NORFOLK	\$38,619	1.64
	=====	
	\$229,556	

*Cost data missing when MEPRS PCOM files submitted for analysis.

TABLE A-12
 NAVAL MEDICAL COMMAND
 DISTRIBUTION OF RADIOLOGY COSTS
 CHAMPUS BENEFICIARY SUPPORT SUBACCOUNT WORK CENTER (FCC)
 FISCAL YEAR 1986

FACILITY NAME	RADIOLOGY COST	PERCENT OF TOTAL BUDGET
NMC ANNAPOLIS	\$24,573	6.12
NH PENSACOLA	\$185	.01
NH SAN DIEGO	\$30	.00
NMC KEY WEST	\$6,260	2.43
NH CORPUS CHRISTI	\$43,209	4.29
NH MILLINGTON	\$191	.02
NH BEAUFORT	\$6,534	.79
NH GROTON	\$12,526	1.42
AIR STA YUMA	*	.25
NH CHERRY POINT	\$1,599	.40
NH NEWPORT	\$13,977	1.49
NH LONG BEACH	\$10,193	.43
NH CAMP LEJEUNE	\$16,557	.94
NH CAMP PENDLETON	\$2,074	.10
NH BREMERTON	\$6,715	.48
NH GUAM	\$84	.01
NH OKINAWA	\$1,330	.12
NMC NORFOLK	\$12,318	.60
	=====	
	\$158,355	

*Cost data missing when MEPRS PCOM files submitted for analysis.

APPENDIX B

NAVAL MEDICAL COMMAND

PLOTS OF PERCENT OF ANCILLARY BUDGET FOR CHAMPUS SUPPORT

BY

PERCENT RETIRED IN CATCHMENT AREA

AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEARS 1985 AND 1986

FIGURE B-1
 NAVAL MEDICAL COMMAND HOSPITALS
 PERCENT OF PHARMACY BUDGET FOR CHAMPUS SUPPORT
 BY PERCENT RETIRED IN CATCHMENT POPULATION
 FISCAL YEAR 1985

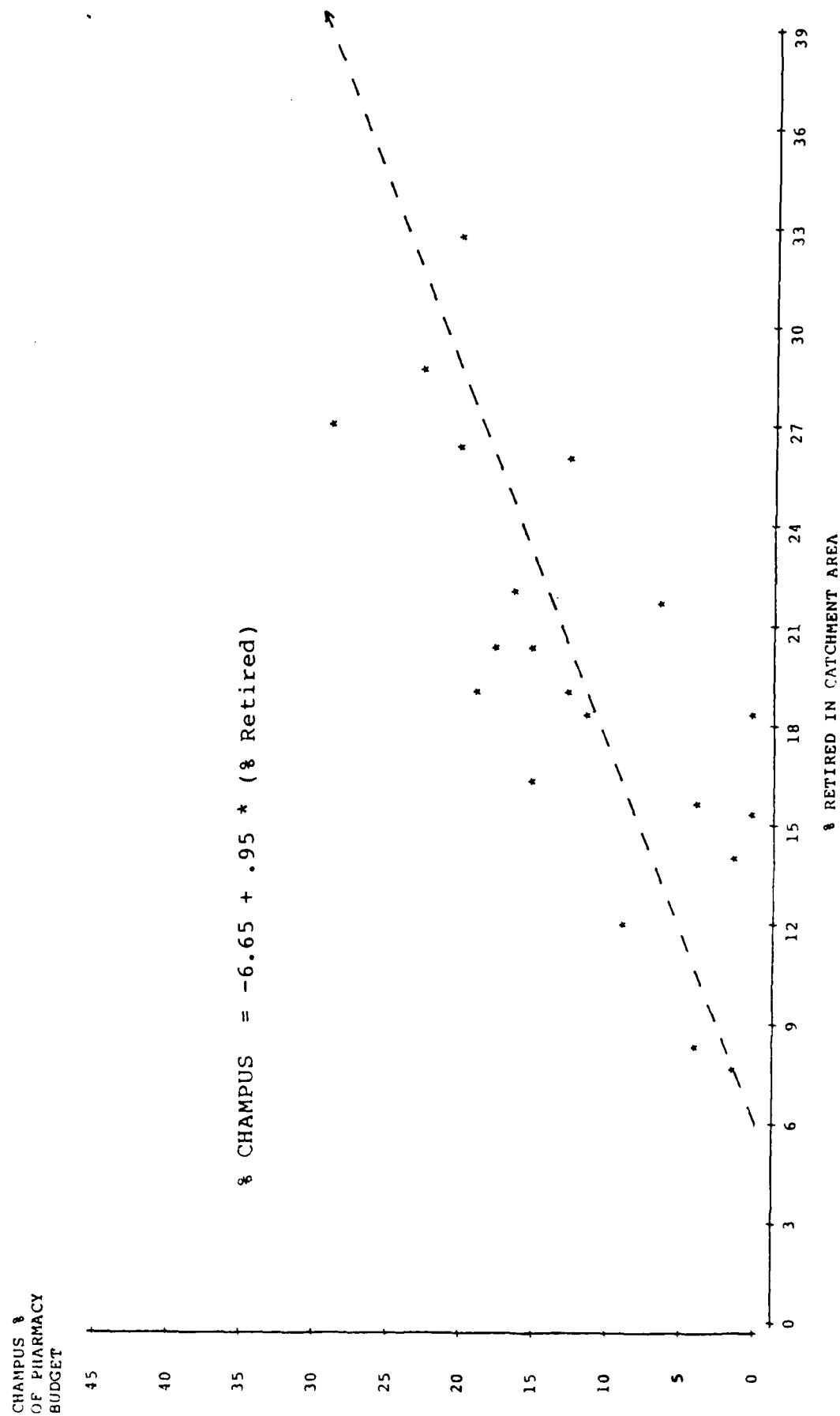


FIGURE B-2
 NAVAL MEDICAL COMMAND HOSPITALS
 PERCENT OF PHARMACY BUDGET FOR CHAMPUS SUPPORT
 BY AVERAGE AGE OF CATCHMENT POPULATION
 FISCAL YEAR 1985

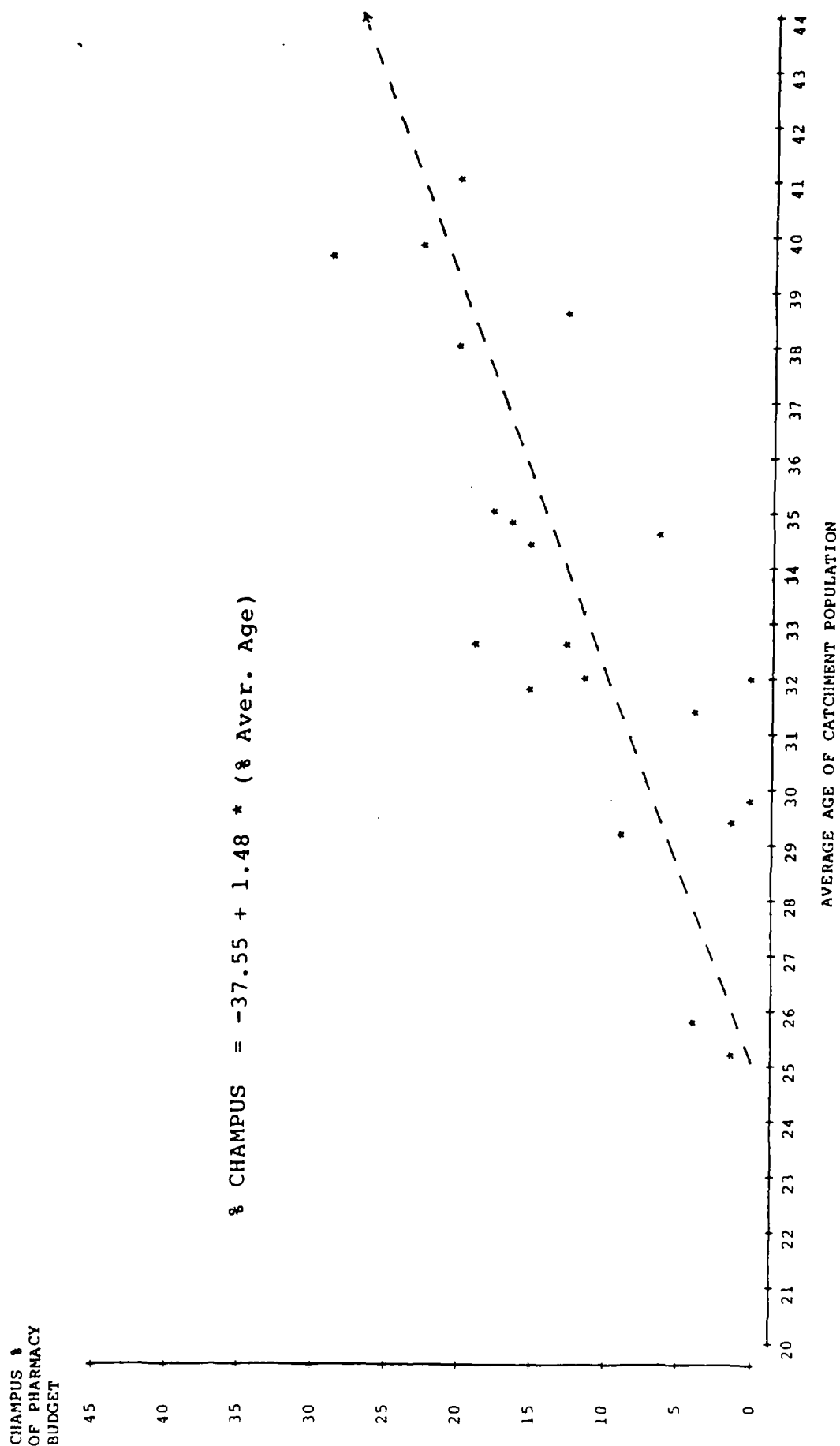
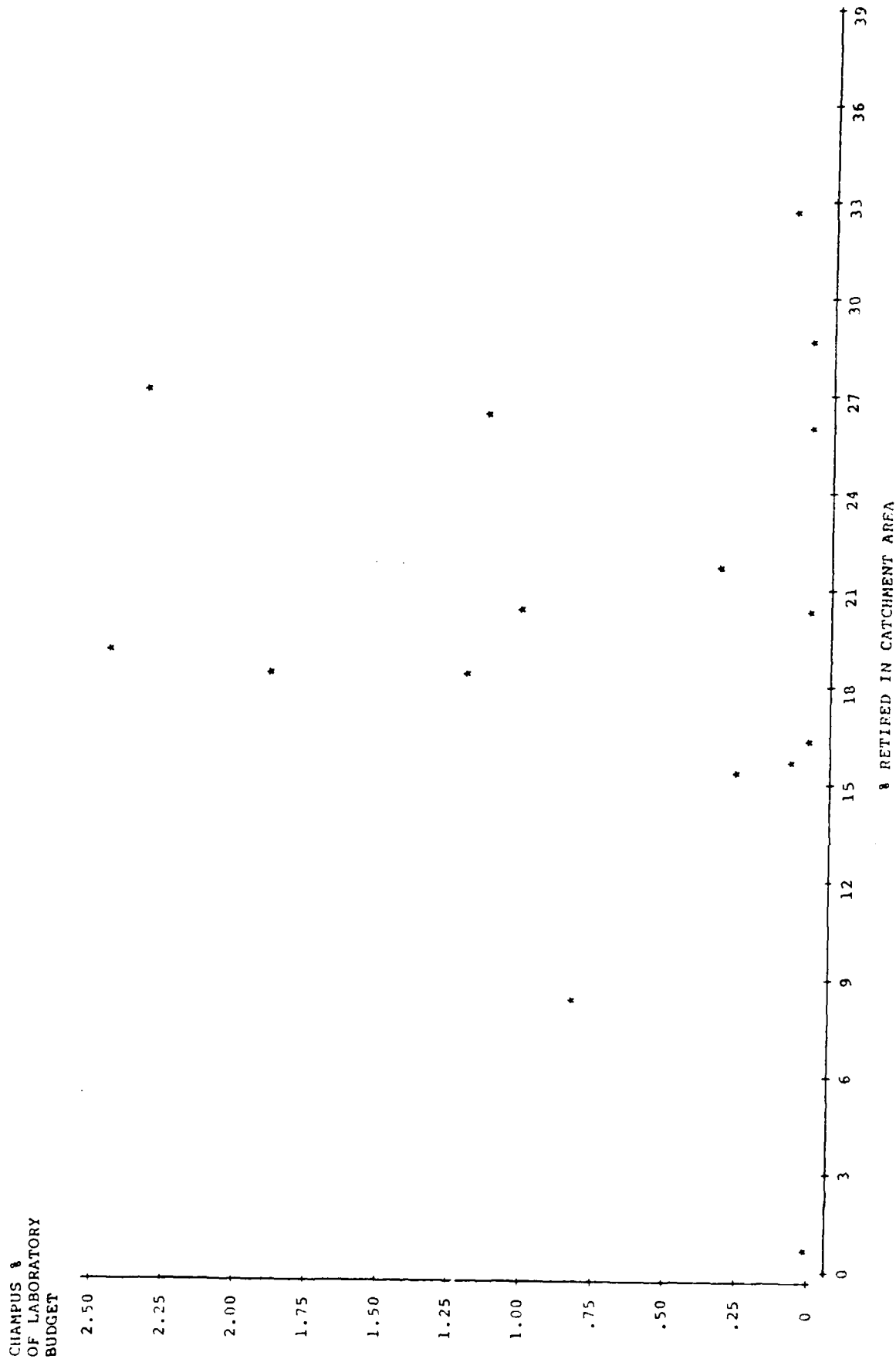


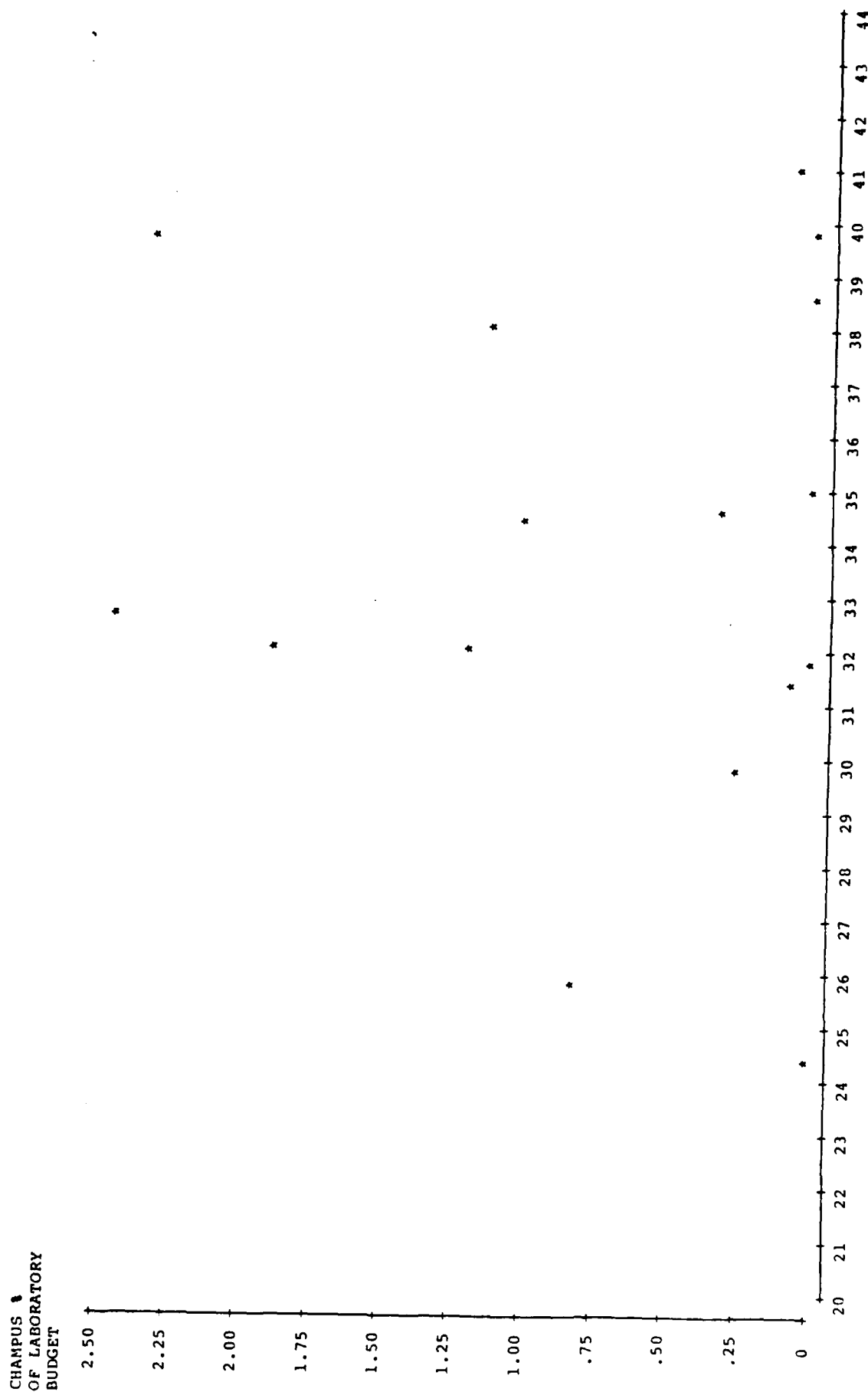
FIGURE B-3
 NAVAL MEDICAL COMMAND HOSPITALS
 PERCENT OF LABORATORY BUDGET FOR CHAMPUS SUPPORT
 BY PERCENT RETIRED IN CATCHMENT POPULATION
 FISCAL YEAR 1985



B-4

FIGURE B-4

NAVAL MEDICAL COMMAND HOSPITALS
PERCENT OF LABORATORY BUDGET FOR CHAMPUS SUPPORT
BY AVERAGE AGE OF CATCHMENT POPULATION
FISCAL YEAR 1985



B-5

FIGURE B-5
 NAVAL MEDICAL COMMAND HOSPITALS
 PERCENT OF RADIOLOGY BUDGET FOR CHAMPUS SUPPORT
 BY PERCENT RETIRED IN CATCHMENT POPULATION
 FISCAL YEAR 1985

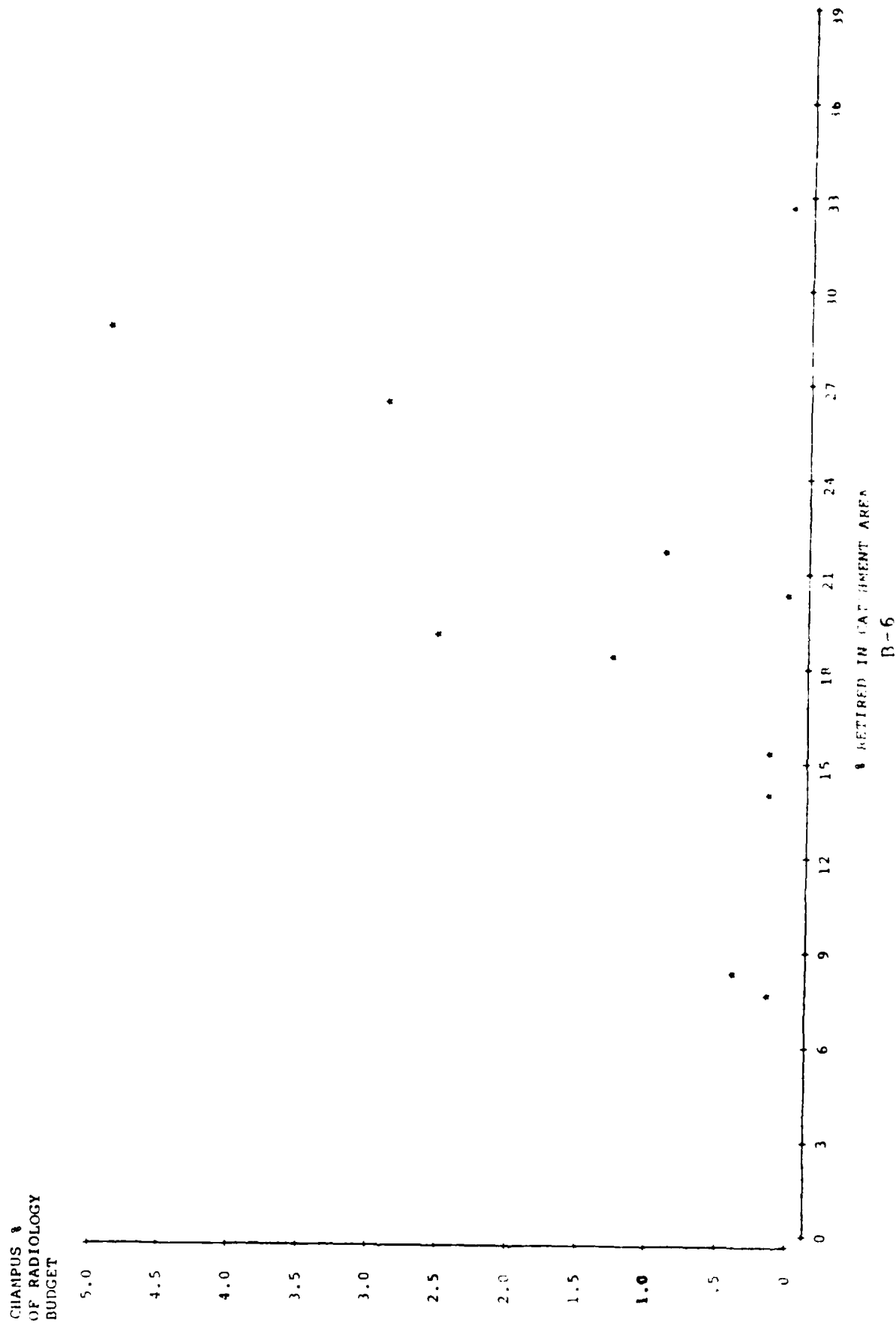
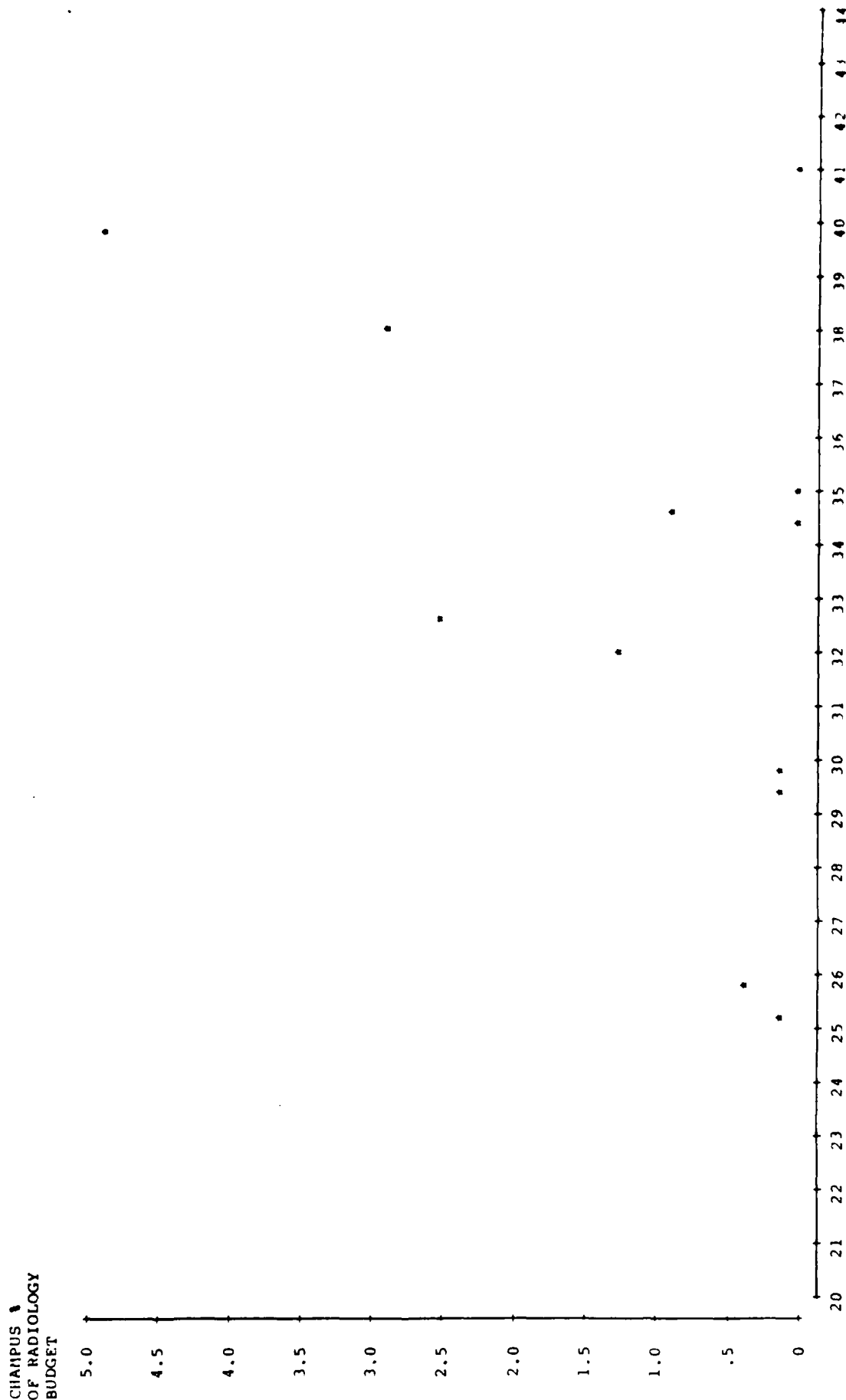


FIGURE B-6

NAVAL MEDICAL COMMAND HOSPITALS
PERCENT OF RADIOLOGY BUDGET FOR CHAMPUS SUPPORT
BY AVERAGE AGE OF CATCHMENT POPULATION
FISCAL YEAR 1985



AVERAGE AGE OF CATCHMENT POPULATION

B-7

FIGURE B-7
 NAVAL MEDICAL COMMAND HOSPITALS
 PERCENT OF PHARMACY BUDGET FOR CHAMPUS SUPPORT
 BY PERCENT RETIRED IN CATCHMENT POPULATION
 FISCAL YEAR 1986

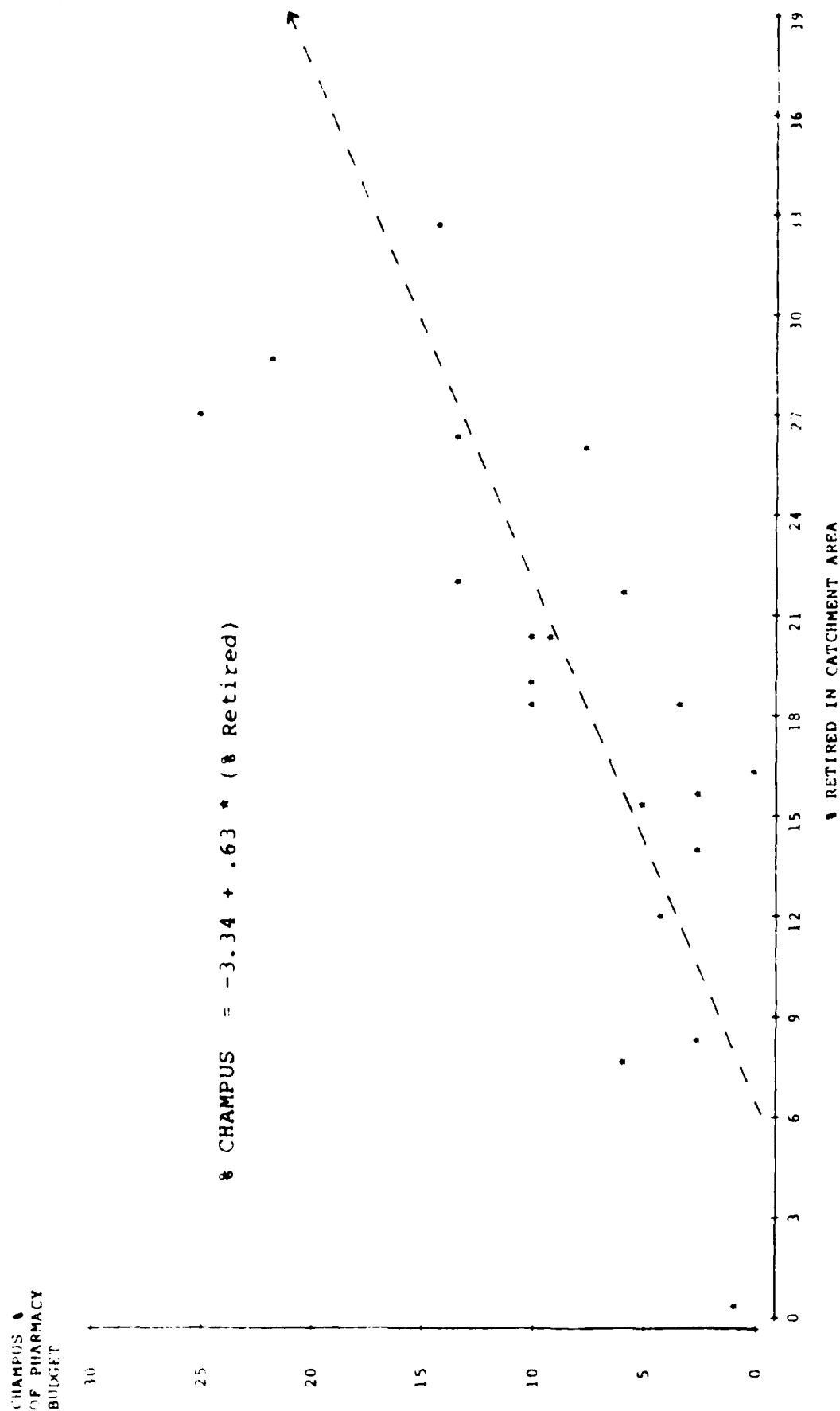


FIGURE B-8

NAVAL MEDICAL COMMAND HOSPITALS

PERCENT OF PHARMACY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1986

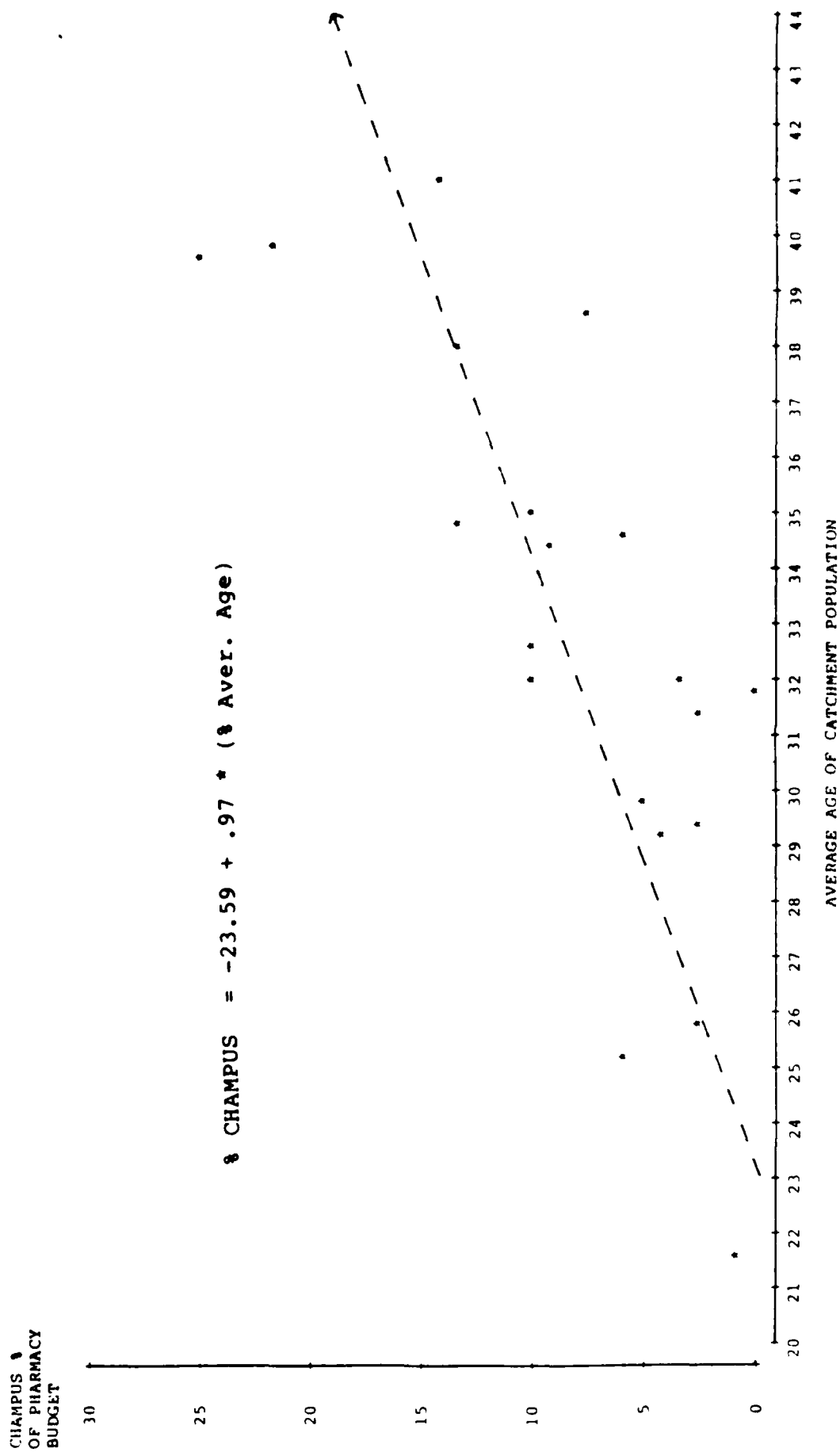


FIGURE B-9
 NAVAL MEDICAL COMMAND HOSPITALS
 PERCENT OF LABORATORY BUDGET FOR CHAMPUS SUPPORT
 BY PERCENT RETIRED IN CATCHMENT POPULATION
 FISCAL YEAR 1986

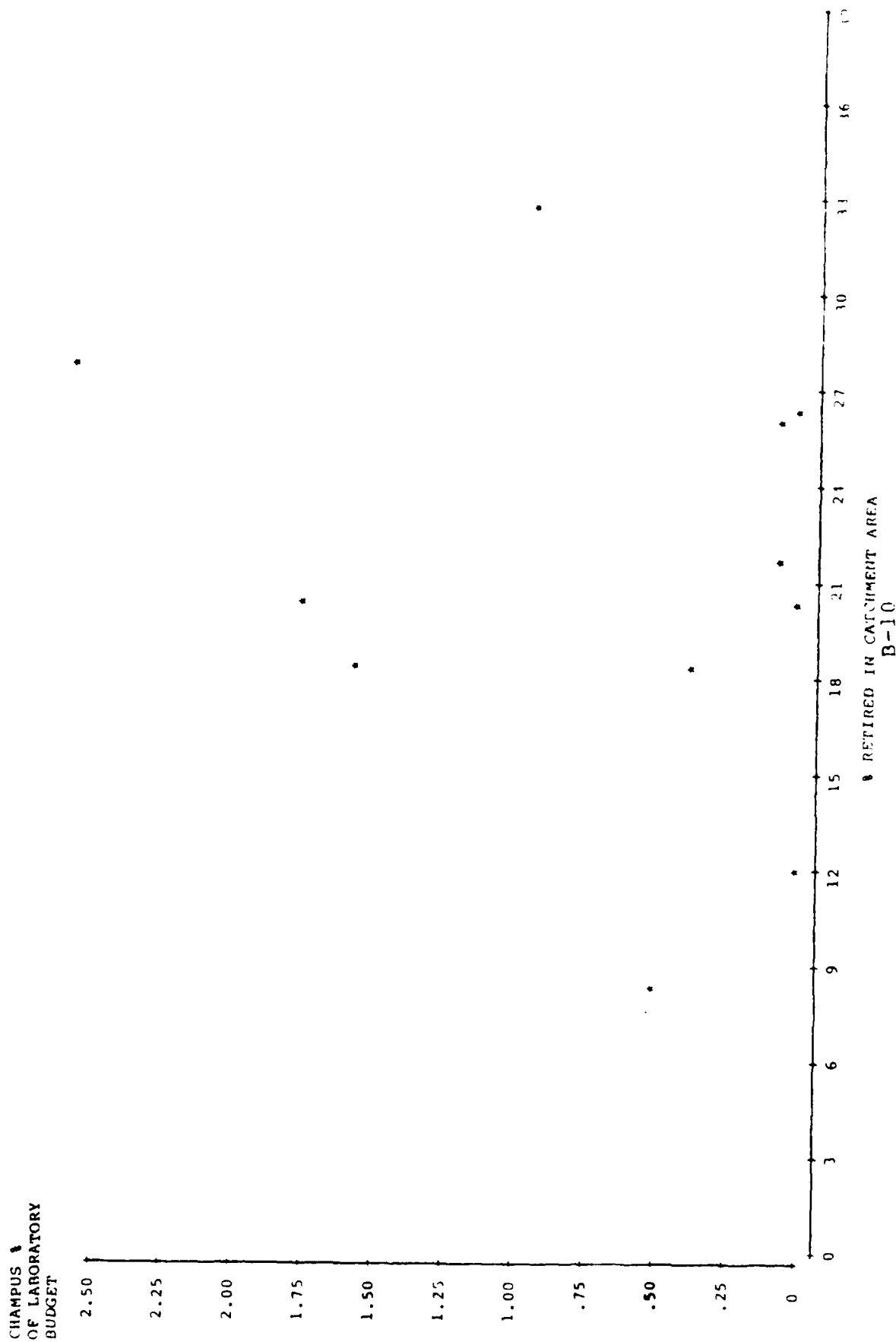


FIGURE B-10

NAVAL MEDICAL COMMAND HOSPITALS

PERCENT OF LABORATORY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1986

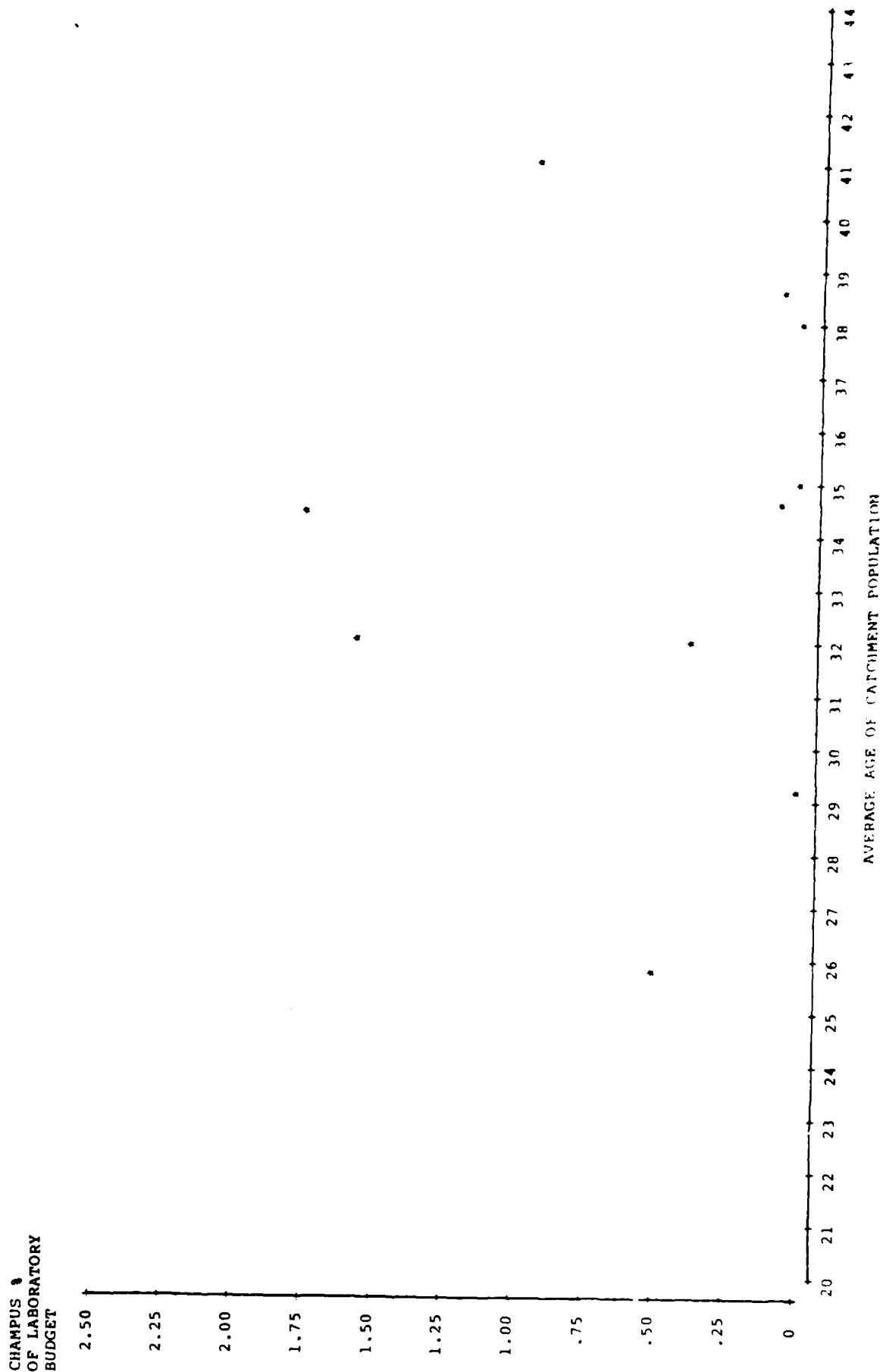


FIGURE B-11

NAVAL MEDICAL COMMAND HOSPITALS

PERCENT OF RADIOLOGY BUDGET FOR CHIAMPUS SUPPORT

BY PERCENT RETIRED IN CATCHMENT POPULATION

FISCAL YEAR 1986

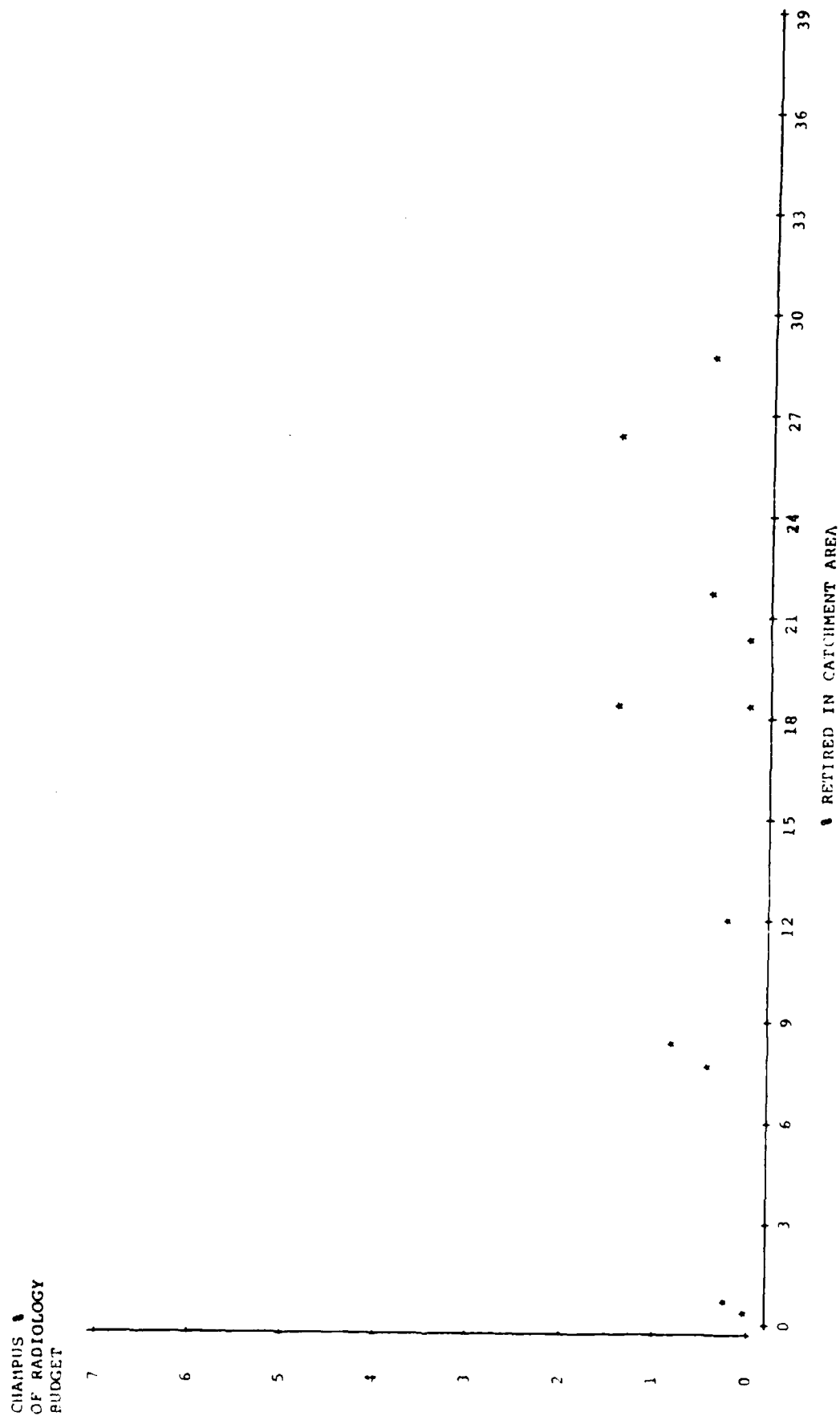


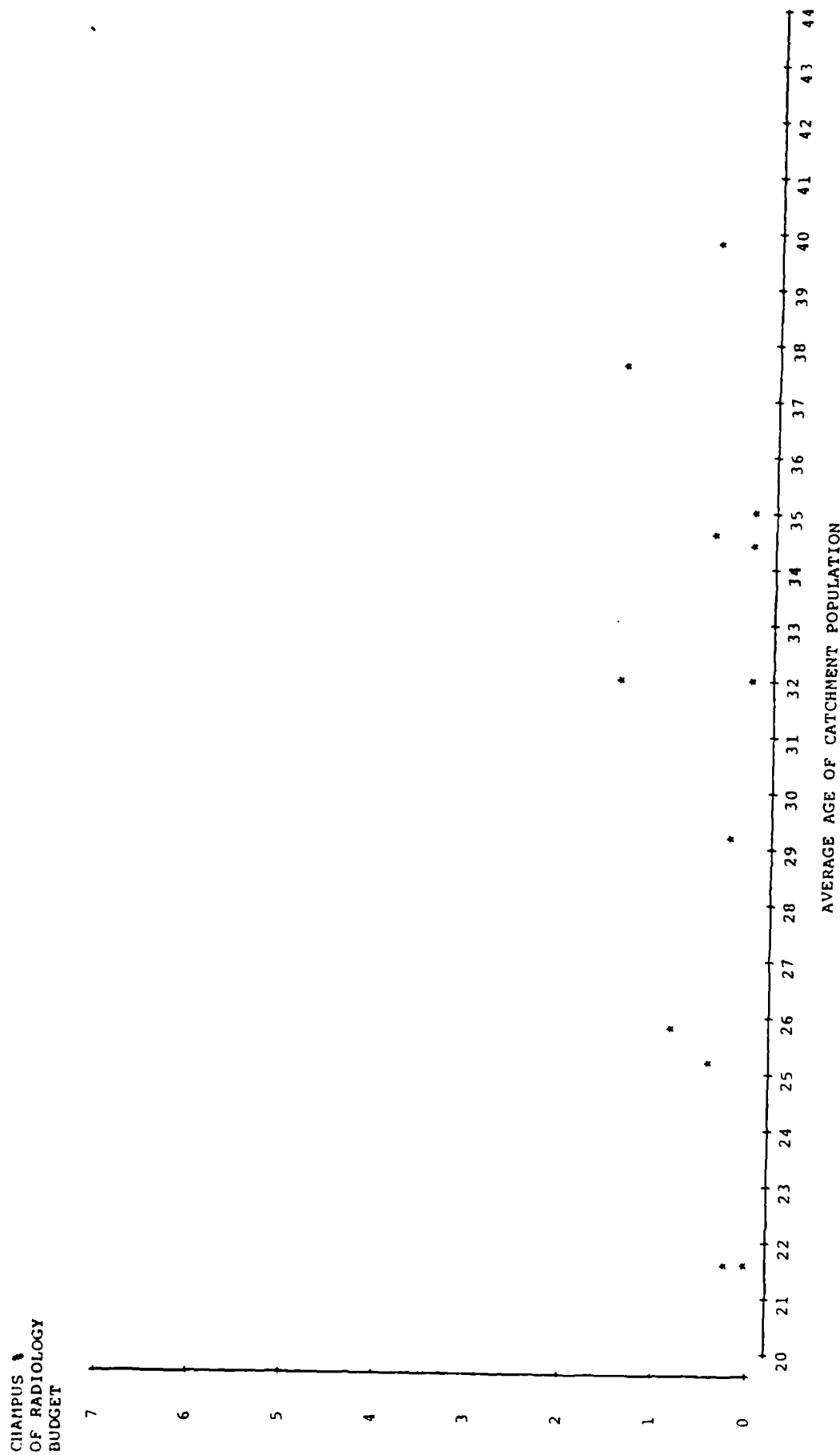
FIGURE B-12

NAVAL MEDICAL COMMAND HOSPITALS

PERCENT OF RADIOLOGY BUDGET FOR CHIAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1986



APPENDIX C

NAVAL MEDICAL COMMAND

ANALYSIS OF VARIANCE TABLES

PREDICTION OF ANCILLARY BUDGET FOR CHAMPUS SUPPORT

BY

PERCENT RETIRED IN CATCHMENT AREA

AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEARS 1985 AND 1986

TABLE C-2

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF PHARMACY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1985

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	830.85617	830.85617	30.403	0.0001
ERROR	18	491.91370	27.32853898		
C TOTAL	19	1322.76987			
ROOT MSE		5.227671	R-SQUARE	0.6281	
DEP MEAN		11.89771	ADJ R-SQ	0.6075	
C.V.		43.93845			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-37.54520683	9.04291629	-4.152	0.0006
AVERAGE AGE	1	1.48343590	0.26903827	5.514	0.0001

TABLE C-3

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF LABORATORY BUDGET FOR CHAMPUS SUPPORT
BY PERCENT RETIRED IN CATCHMENT POPULATION

FISCAL YEAR 1985

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.12974767	0.12974767	0.164	0.6912
ERROR	14	11.04412372	0.78886598		
C TOTAL	15	11.17387140			
ROOT MSE		0.8881813	R-SQUARE	0.0116	
DEP MEAN		0.7200986	ADJ R-SQ	-0.0590	
C.V.		123.3416			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	0.48859624	0.61249623	0.798	0.4384
% RETIRED	1	0.01176286	0.02900446	0.406	0.6912

TABLE C-4

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF LABORATORY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1985

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.05147399	0.05147399	0.065	0.8028
ERROR	14	11.12239741	0.79445696		
C TOTAL	15	11.17387140			
ROOT MSE		0.8913232	R-SQUARE	0.0046	
DEP MEAN		0.7200986	ADJ R-SQ	-0.0665	
C.V.		123.7779			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	0.31270404	1.61594041	0.194	0.8493
AVERAGE AGE	1	0.01206871	0.04741353	0.255	0.8028

TABLE C-5

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF RADIOLOGY BUDGET FOR CHAMPUS SUPPORT

BY PERCENT RETIRED IN CATCHMENT POPULATION

FISCAL YEAR 1985

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	5.61154234	5.61154234	2.644	0.1350
ERROR	10	21.22380729	2.12238073		
C TOTAL	11	26.83534963			
ROOT MSE		1.456839	R-SQUARE	0.2091	
DEP MEAN		1.102242	ADJ R-SQ	0.1300	
C.V.		132.1706			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-0.73532682	1.20580883	-0.610	0.5556
% RETIRED	1	0.09469527	0.05823697	1.626	0.1350

TABLE C-6

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF RADIOLOGY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1985

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	6.13496793	6.13496793	2.964	0.1159
ERROR	10	20.70038169	2.07003817		
C TOTAL	11	26.83534963			
ROOT MSE		1.438763	R-SQUARE	0.2286	
DEP MEAN		1.102242	ADJ R-SQ	0.1515	
C.V.		130.5306			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-3.78092991	2.86676104	-1.319	0.2166
AVERAGE AGE	1	0.14752785	0.08569531	1.722	0.1159

TABLE C-7

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF PHARMACY BUDGET FOR CHAMPUS SUPPORT
BY PERCENT RETIRED IN CATCHMENT POPULATION

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	458.55573	458.55573	22.308	0.0002
ERROR	18	369.99976	20.55554232		
C TOTAL	19	828.55549			
ROOT MSE		4.533822	R-SQUARE	0.5534	
DEP MEAN		8.29039	ADJ R-SQ	0.5286	
C.V.		54.68768			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-3.33781532	2.66252273	-1.254	0.2260
% RETIRED	1	0.62828102	0.13302166	4.723	0.0002

TABLE C-8

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF PHARMACY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	482.97967	482.97967	25.157	0.0001
ERROR	18	345.57583	19.19865704		
C TOTAL	19	828.55549			
ROOT MSE		4.381627	R-SQUARE	0.5829	
DEP MEAN		8.29039	ADJ R-SQ	0.5597	
C.V.		52.85188			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-23.58531726	6.43030323	-3.668	0.0018
AVERAGE AGE	1	0.97241328	0.19387503	5.016	0.0001

TABLE C-9

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF PHARMACY BUDGET FOR CHAMPUS SUPPORT
BY AVERAGE AGE OF CATCHMENT POPULATION (SQUARED)

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	542.79121	271.39560	16.145	0.0001
ERROR	17	285.76429	16.80966383		
C TOTAL	19	828.55549			
ROOT MSE		4.099959	R-SQUARE	0.6551	
DEP MEAN		8.29039	ADJ R-SQ	0.6145	
C.V.		49.45436			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	32.33228615	30.24839275	1.069	0.3001
AVERAGE AGE	1	-2.60991573	1.90776529	-1.368	0.1891
AVER. AGE (SQUARED)	1	0.05591581	0.02964297	1.886	0.0765

TABLE C-10

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF LABORATORY BUDGET FOR CHAMPUS SUPPORT
BY PERCENT RETIRED IN CATCHMENT POPULATION

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.44599145	0.44599145	0.540	0.4813
ERROR	9	7.43948256	0.82660917		
C TOTAL	10	7.88547401			
ROOT MSE		0.9091805	R-SQUARE	0.0566	
DEP MEAN		0.7097784	ADJ R-SQ	-0.0483	
C.V.		128.0936			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	0.07357468	0.90847527	0.081	0.9372
% RETIRED	1	0.03029127	0.04123865	0.735	0.4813

TABLE C-11

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF LABORATORY BUDGET FOR CHAMPUS SUPPORT

BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.49135503	0.49135503		
ERROR	9	7.39411897	0.82156877	0.598	0.4591
C TOTAL	10	7.88547401			
ROOT MSE		0.9064043	R-SQUARE	0.0623	
DEP MEAN		0.7097784	ADJ R-SQ	-0.0419	
C.V.		127.7024			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-0.94257906	2.15403191	-0.438	0.6720
AVERAGE AGE	1	0.04785659	0.06188223	0.773	0.4591

TABLE C-12

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF RADIOLOGY BUDGET FOR CHAMPUS SUPPORT

BY PERCENT RETIRED IN CATCHMENT POPULATION

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.36249646	0.36249646	1.307	0.2795
ERROR	10	2.77254811	0.27725481		
C TOTAL	11	3.13504457			
ROOT MSE		0.5265499	R-SQUARE	0.1156	
DEP MEAN		0.4388581	ADJ R-SQ	0.0272	
C.V.		119.9818			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	0.14346598	0.29973749	0.479	0.6425
% RETIRED	1	0.01936713	0.01693764	1.143	0.2795

TABLE C-13

NAVAL MEDICAL COMMAND HOSPITALS

PREDICTION OF RADIOLOGY BUDGET FOR CHAMPUS SUPPORT
BY AVERAGE AGE OF CATCHMENT POPULATION

FISCAL YEAR 1986

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.28067137	0.28067137	0.983	0.3448
ERROR	10	2.85437320	0.28543732		
C TOTAL	11	3.13504457			
ROOT MSE		0.5342633	R-SQUARE	0.0895	
DEP MEAN		0.4388581	ADJ R-SQ	-0.0015	
C.V.		121.7394			

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > T
INTERCEPT	1	-0.36321660	0.82342836	-0.441	0.6685
AVERAGE AGE	1	0.02610495	0.02632566	0.992	0.3448

END

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